Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	3	Shen NEAR Che-Kun NEAR James	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/10/06 13:35
L2	52	zeta ADJ globin	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/10/06 13:39
L3	9	HS-40 ADJ enhancer	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/10/06 13:36
L7	9	HS-40 enhancer	US-PGPUB; USPAT; EPO; JPO; DERWENT	SAME	ON	2005/10/06 13:38
L8	6	TCTGAGTCA	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/10/06 13:38
L9	14	zeta globin promoter	US-PGPUB; USPAT; EPO; JPO; DERWENT	WITH	ON	2005/10/06 13:40
L10	26	Shen NEAR james	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/10/06 13:42
L16	14	(US-20020108134-$ or US-20020133838-$ or US-20020148000-$ or US-20030233669-$).did. or (US-4822821-$ or US-5827693-$ or US-5919997-$ or US-6172039-$ or US-6303845-$ or US-6451334-$).did. or (US-6022738-$ or US-6303845-$ or US-20020108134-$ or US-20020133838-$).did.	US-PGPUB; USPAT; DERWENT	OR	ON	2005/10/06 13:43

```
=> d his

     (FILE 'HOME' ENTERED AT 13:49:20 ON 06 OCT 2005)

     FILE 'MEDLINE, CANCERLIT, AGRICOLA, CAPLUS, SCISEARCH' ENTERED AT
     13:50:13 ON 06 OCT 2005
L1            90 S (HS-40 ENHANCER) OR (HS(2W)ENHANCER)
L2            35 DUP REM L1 (55 DUPLICATES REMOVED)
L3            17 S L2 AND PY<=1998
L4             7 S L3 AND MUT?
L5            15 S L2 AND MUT?
L6             8 S L5 NOT L4
L7             8 DUP REM L6 (0 DUPLICATES REMOVED)
                 E SHEN CHE-KUN?/AU
L10           46 S E1
L11            3 S L10 AND L1
L12            3 DUP REM L11 (0 DUPLICATES REMOVED)

=> d an ti so au ab pi l12 1-3

L12  ANSWER 1 OF 3  CAPLUS  COPYRIGHT 2005 ACS on STN
AN   2003:1004738  CAPLUS
DN   140:1576
TI   A strong variant of the HS-40 enhancer and
     its use in expression vectors for transgenic animals
SO   U.S. Pat. Appl. Publ., 13 pp., Cont.-in-part of U.S. Ser. No. 961,563.
     CODEN: USXXCO
IN   Shen, Che-kun James
AB   A substitution mutant of the HS-40 enhancer
     of ζ-globin gene promoter, a 350-400 bp enhancer element located
     about 40 kb upstream of ζ-globin gene is used in expression vectors
     for high level expression of foreign genes in transgenic animals.  HS-40
     is the major cis-acting regulatory element responsible for the
     developmental stage-and erythroid lineage-specific expression of the human
     α-like globin genes, the embryonic ζ and the adult
     α2/α/1.  A single nucleotide change in the 3'NF-E2/AP1 element
     of the human HS-40 enhancer, unlike the wild
     type HS-40 enhancer, confers
     position-independent and copy number-dependent expression on a transgene.
     The mutation also relieves the developmental regulation of expression from
     the promoter of the ζ-globin gene.  In addition, the single nucleotide
     change allows expression of the gene in the cells of an adult mouse, an
     effect not seen for the wild type HS-40
     enhancer.  The transgenic animal may include pig, rat, cow,
     rabbit, goat, guinea pig, prairie baboon, squirrel, monkey, chimpanzee,
     bird, frog, toad, chicken, turkey and sheep.  The generation of transgenic
     mice expressing a growth hormone gene in erythroblasts using the
     HS-40(mt) enhancer and the ζ-globin promoter is
     demonstrated.  Serum growth hormone levels of up to 6,490 ng/mL were
     obtained.
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     ---------------     ----   --------    --------------------   --------
PI   US 2002148000        A1    20021010    US 2001-14220          20011109
     US 6303845           B1    20011016    US 2000-536094         20000324
     US 2002133838        A1    20020919    US 2001-961563         20010920

L12  ANSWER 2 OF 3  CAPLUS  COPYRIGHT 2005 ACS on STN
AN   2001:757858  CAPLUS
DN   135:314417
TI   Vectors containing mutated HS-40 enhancer of
     ζ-globin gene promoter and its regulation of transgene expression in
     transgenic mice
SO   U.S., 7 pp., Division of U.S. Ser. No. 205,015, abandoned.
     CODEN: USXXAM
IN   Shen, Che-Kun James
AB   The invention relates to a mutated HS-40
     enhancer of ζ-globin gene promoter, a 350-400 bp enhancer
     element located about 40 kb upstream of ζ-globin gene.  HS-40 is the
     major cis-acting regulatory element responsible for the developmental
```

stage-and erythroid lineage-specific expression of the human α-like globin genes, the embryonic ζ and the adult α2/α/1. The invention is based on the discovery that a single nucleotide change in the 3'NF-E2/AP1 element of the human **HS-40 enhancer**, unlike the wild type **HS-40 enhancer**, confers position-independent and copy number-dependent expression on a transgene. In addition, the single nucleotide change allows expression of the gene in the cells of an adult mouse, an effect not seen for the wild type **HS-40 enhancer**. Accordingly, the invention provides a viral expression vector (e.g., a retrovirus) expressing a transgene regulated by (1) a transcriptional start site; (2) a promoter (e.g., a tissue-specific promoter such as ζ-globin promoter) operably linked to the transcriptional start site; and (3) the above mutated **HS-40 enhancer** operably linked to the promoter.

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6303845	B1	20011016	US 2000-536094	20000324
	TW 585913	B	20040501	TW 1999-88121251	19991204
	US 2002133838	A1	20020919	US 2001-961563	20010920
	US 2002108134	A1	20020808	US 2001-977432	20011015
	US 2002148000	A1	20021010	US 2001-14220	20011109

Kaushal, Sumesh

From: Kaushal, Sumesh
Sent: Thursday, October 06, 2005 1:47 PM
To: STIC-Biotech/ChemLib
Subject: 10/014220: Interference Search

10/014220: Interference Search

- **SEQ ID NO: 1 DNA 9nt**
- **SEQ ID NO: 2 DNA 147nt**
- **SEQ ID NO: 3 DNA 356nt**

thanks

S.Kaushal
AU1633, REM2.B85
Ph: 571-272-0769
Mail Box: REM2.C70